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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,355	07/18/2003	Young-Hun Choi	1293.1903	2570
21171	7590	05/25/2005	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			DANG, KHANH	
			ART UNIT	PAPER NUMBER
			2111	

DATE MAILED: 05/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/621,355

Applicant(s)

CHOI, YOUNG-HUN

Examiner

Khanh Dang

Art Unit

2111

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

In claim 9, line 3, "connected" should be changed to – connected to --.

In claim 10, "the opening" should be changed to – the selecting --.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-13 and 15-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Lou et al. (Lou, 2003/0093599).

As broadly drafted, these claims do not define any structure/step that differs from Lou.

With regard to claim 6, Lou discloses a display apparatus (shown generally at Figs. 1 and 4), in which in a plurality of universal serial bus (USB) systems (121 and 122, for example) sharing one display device (signal switch box 10 including video panel control device module 54 and on screen display 56) are included, and USB devices (USB peripherals 16, 18, 20, 22, 242, 242, for example), connected to the

Art Unit: 2111

display device (signal switch 10 including video panel control device module 54 and on screen display 56) and USB devices (USB peripherals 16, 18, 20, 22, 242, 242, for example) connected to the plurality of USB systems (121 and 122, for example) are shared, comprises: a relay unit (a switching device in signal switch box 10) included in the display device (since the signal switch 10, including video panel control device module 54 and on screen display 56, is capable of displaying information, it is clear that the signal switch box can be called "display device"), while output of a first predetermined USB system (121, for example), among the plurality of USB systems (121 and 122, for example) is transmitted to the display device (signal switch box 10 including video panel control device module 54 and on screen display 56), the relay unit (a switch module in signal switch box 10) selects to share the USB device being used in the USB system with a second predetermined USB system (it is clear that any of the USB peripherals 16, 18, 20, 22, 242, 242, for example, is shared between the plurality of USB systems 121 and 122, for example, and the switch module of signal switch box 10 can select any shared USB peripheral for communication with any of a plurality of USB systems 121 and 122 via a selected channel, for example), and if a first driver (any USB device can only operate once supplied with USB driver associated with the USB host system or controller), which corresponds to the shared USB device in the first USB system is disabled (once the host USB system is disconnected or not in use with a shared USB peripheral, it is clear that the driver associated with by such a system or controller is disabled and no longer associated with the shared USB peripheral), the relay unit buffers information transmitted from the shared USB device in the display

device (it is clear that information from a particular shared USB peripheral must be temporary stayed in the switch module before the switch module can completely establish a new channel connecting a particular shared USB peripheral and a particularly USB system via a particular channel) and transmits the information buffered in the display device to a second driver (it is clear that once connection has been established for a particular shared USB peripheral and a particular USB system, the USB driver associated by that particular host system or a controller must be now responsible for communication with the switched USB peripheral), which corresponds to the shared USB device in the second USB system.

With regard to claim 7, it is clear from the above discussion that if the shared USB device is a keyboard (16, for example) or mouse (18, for example), an input signal of the display device is switched so that output of the second USB system are transmitted to the display device. See also Fig. 4 and description thereof.

With regard to claim 8, it is clear from the above discussion that if the USB peripheral is released from the second USB system (one of USB systems 121 and 122, for example) and if the first driver (USB driver associated with one of the USB systems 121 and 122), which corresponds to the shared USB device (any shared USB peripheral), in the first USB system is enabled, the relay unit transmits the information transmitted from the USB device to the first driver, which corresponds to the USB device, in the first USB system (it is clear that once connection has been established for a particular shared USB peripheral and a particular USB system or controller, the

USB driver associated by that particular host system or controller must be now responsible for communication with the switched USB peripheral).

With regard to claim 9, Lou discloses a display method, comprising: opening a sharing program stored in a first Universal Serial Bus (USB) host (it is clear that when a user uses one of a plurality of USB systems 121 or 122 connected to a shared USB mouse or keyboard, the user must use software program to open the display screen showing on-screen connections in order to select any other communication channels); selecting a USB device (any shared USB mouse or keyboard), connected the first USB host (one of USB systems 121 or 122), to share the selected USB device (a shared keyboard or mouse) with a second USB host (the other one of USB systems 121 and 122); determining whether an ID of the selected USB device exists (every USB device must carry device ID so that a host or a controller can determine whether a USB device is connected to the network, see at least [0044] to [0048]), and if the ID exists, disabling drivers in the first USB host corresponding to the selected USB device (once the host USB system is disconnected or not in use with a shared USB peripheral, it is clear that the driver associated with by such a system or controller is disabled and no longer associated with the shared USB peripheral); transmitting data from the selected USB device to the second USB host; and operating drivers, associated with the second USB host or controller, corresponding to the selected USB device according to the transmitted data (it is clear that once connection has been established for a particular shared USB peripheral and a particular USB system, the USB driver associated by that

particular host system or controller must be now responsible for communication with the switched USB peripheral).

With regard to claim 10, it is clearly inherent that the selection can be made by clicking on a mouse button.

With regard to claim 11, it is clear that since the on-screen display of Lou displays all connecting channels between the any of the plurality of USB systems 121 and 122 and any of the USB shared peripherals such as mouse and keyboard, any channel connecting a USB system and a shared USB peripheral can be selected.

With regard to claim 12, it is clear that since the on-screen display of Lou displays all connecting channels between any of the plurality of USB systems 121 and 122 and any of the USB shared peripherals such as mouse and keyboard, any channel connecting a USB system and a shared USB peripheral can be selected by channel switching including switching from an output of the first USB host to an output of the second USB host.

With regard to claim 13, every USB device must carry device ID so that a host or a controller can determine whether a USB device is connected to the network, see at least [0041] to [0048]).

With regard to claims 15 and 16, it is clear that the switch signal can connect or release any connections between the shared USB peripheral and any particular USB host system by selecting a channel displayed on the on-screen display.

/ With regard to claim 17, it is clear that the switch signal can connect or release any connections between the shared USB peripheral and any particular USB host

Art Unit: 2111

system by selecting a channel displayed on the on-screen display. Further, every USB device must carry device ID so that a host or a controller can determine whether a USB device is connected to the network, see at least [0041] to [0048].

With regard to claims 18-28, and 31, see discussion above. Note also that the USB system hosts 121, 122, the signal switch 10 and a plurality of USB peripherals are connected and communicated via USB host ports and USB ports.

With regard to claim 29, it is clear that the shared USB device can be a monitor.

With regard to claim 30, any display apparatus comprises: an image signal input unit to receive an image signal; a signal processing unit to perform signal processing of the image signal; a display unit to display the image signal; and a monitor control unit to control the image signal input unit, the signal processing unit, and the display unit.

With regard to claims 1-5, see discussion above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lou.

Lou, as discussed above, discloses the claimed invention. Lou does not particularly disclose the use of a buffer for temporarily storing the transmitted information before transmitting the information to drivers associated with another USB

Art Unit: 2111

host system. However, a buffer is old and well-known for its use as a temporary storage area. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a buffer in Lou to temporary store information before establishing a new channel for the shared USB peripheral and the USB host system, since the examiner takes Official Notice that the use of a buffer as a temporary storage area is old and well-known, and using the same in Lou, for the purpose of providing a smooth data transfer between channels using a switch signal, only involves ordinary skill in the art. If Applicants choose to properly challenge the use of a buffer as a temporary storage area, supportive document(s) will be provided. Note that it is inherent that the device ID must be decoded so that the USB device can be identified so that it can be integrated into a USB network.

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lou.

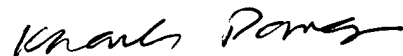
Lou, as discussed above, discloses the claimed invention. Lou does not particularly disclose the use of first and second buffers for temporarily storing the transmitted information before transmitting/switching the information to drivers associated with another USB host system. However, a buffer is old and well-known for its use as a temporary storage area. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a buffer in Lou to temporary store information before establishing a new channel for the shared USB peripheral and the USB host system, since the examiner takes Official Notice that the use of a buffer as a temporary storage area is old and well-known, and using the same in Lou, for the

Art Unit: 2111

purpose of providing a smooth data transfer between channels using a switch signal, only involves ordinary skill in the art. If Applicants choose to properly challenge the use of a buffer as a temporary storage area, supportive document(s) will be provided. Note that it is inherent that the device ID must be decoded so that the USB device can be identified so that it can be integrated into a USB network.

U.S. Patent Nos. 6,804,727 to Rademacher, US2004/0075638 to Han, US 2003/0079055 to Chen, and US 2004/0153597 TO Kanai et al. are cited as relevant art.

Any inquiry concerning this communication should be directed to Khanh Dang at telephone number 571-272-3626.



Khanh Dang
Primary Examiner
